radiolarians, each with a pattern peculiar to each species. The sponge-spicules also are of many definite shapes, according to the species. For example, in one species three cells of the epithelium migrate separately into the parenchyma, there come together and, by a co-operative activity, construct a precisely regular triangulate spicule. In other words, the problems of morphogenesis according to the pattern of the species are presented in relative simplicity by the unicellular organism and by others of very simple colonial structure. Here, if anywhere, the chemical and the *Gestalt* principles might be expected to throw some light, if together they are the essential causal factors. But no light shines.

The most weighty objection to Kohler's attempt to apply the *Gestalt* principle as the key to morphogenesis, is its inevitable ignoring in every ontogenesis of all the wealth of morphogenetic processes which are manifestly consequences of the phylogenetic history of the organism. Incidentally, I remark that the same objection lies against his attempt to make it the key to all mental activities—namely, it takes altogether too little account of the determining influence of past experience, both individual and racial. In the morphogenesis of man or of any higher mammal we find recapitulated many of the formations characteristic of ancestral stages of evolution. The embryo goes through a distinctly fish-like stage with gill-slits and corresponding arteries; and throughout life the gross anatomy of man's arterial system bears the evidences of this phylogenetic history. My

point is that
the arterial system might be varied in
many ways as
regards the number and distribution of its
branches,
and it would be easy to imagine various more
regular and
symmetrical distributions, any one of which
might convey